

**REMARKS**

This amendment is filed in response to the final Office Action mailed on February 4, 2005. This amendment includes a response to the new ground of rejection presented in the final Office Action. All objections and rejections are respectfully traversed.

Claims 1 – 25 are in the application and currently pending.

Claims 6 – 11, 13 – 17, 20 and 23 were allowed.

At paragraphs 5 and 6 of the Office Action, claims 24 and 25 were rejected under 35 U.S.C. § 101 on the grounds that the claimed invention is directed to non-statutory subject matter.

The present invention as set out in representative claim 24 comprises in part:

***Electromagnetic signals propagating on a computer network containing executable program instructions for creating and maintaining a plurality of virtual filers (vfilers) within a filer, the executable program instructions comprising program instructions for:***

allocating dedicated resources of the filer to each vfiler;  
sharing common resources of the filer among all of the vfilers; and  
enabling access to the dedicated and shared resources using logical boundary checks and security interpretations of those resources within the server.

Applicant respectfully urges that the novel aspects of the invention are tangibly embodied in the electromagnetic signals propagating on the computer network. Further, Applicant respectfully urges that the embodiment of electromagnetic signals for creating and maintaining a plurality of vfilers comprising programmed instructions for the practice of the steps set forth thereafter on the computer fully satisfies all requirements of 35 U.S.C. § 101, and all requirements set out in the MPEP.

That is, Applicant respectfully urges that the embodiment of the instructions in electromagnetic signals meets all the requirements of 35 U.S.C. § 101, especially as

clarified by MPEP 2106 IV, B, 1 (c). Further, MPEP 2106 IV, B, 1 (c) states at page 2100-14:

“However, a signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature. See *O’Reilly* 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519 – 21, 205 U.S.P.Q. 221, 225 – 26 (CCPA 1980).”

In the case *In re Breslow*, claims were permitted by the court (CCPA) to chemical species which are transient in nature, and cannot be separated out of the mixture in which they are created. The MPEP cites this patentability of transitory phenomenon in chemical reactions in support of the statement by the MPEP, “However a **signal** claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature” (Emphasis added).

The important point for patentability is the practical application of electromagnetic energy. And a practical application of electromagnetic energy is transmission of a program over a computer network where the program is for the practice of a novel method. This practical application of electromagnetic energy is patentable subject matter, as explained by MPEP 2106 IV, B, 1 (c).

A copy of the *In re Breslow* decision from 205 U.S.P.Q. 221 is attached to this amendment for the convenience of the Examiner.

Applicant respectfully urges that embedding instructions for execution in a processor in an electromagnetic signal propagating on a computer network meets the practical application requirements of 35 U.S.C. §101 and of MPEP 2106 IV, B, 1 (c) and that claims 24 and 25 therefore claim statutory subject matter. Accordingly, reconsideration of the rejection of claims 24 and 25 is respectfully requested.

In paragraphs 7 and 8 of the Office Action, claims 1 – 5, 12, 18 – 19, 21 – 22, and 24 were rejected under 35 U.S.C. §102 (a) as being anticipated by Forecast et al., United States Patent No. 6,230,200 issued on May 8, 2001, herein after “Forecast”.

The present invention as set forth in representative claim 1 comprises in part:

A method for creating and maintaining a plurality of virtual servers within a server, the method comprising the steps of:  
partitioning resources of the server *to establish an instance of each virtual server*; and  
*enabling controlled access to the resources using logical boundary checks and security interpretations of those resources within the server.*

By way of background, Forecast describes a method of allocating resources in a file server by generating a computer model of the file server. For example, the computer model is a dynamic model which is maintained in memory by a controller of the file server. The dynamic model comprises an acyclic graph in which nodes represent the data handling components and edges represent data stream paths. Each node has a list of resources and current allocations of the resources.

One embodiment of Forecast is video file server software. The video file server processes requests from network clients for “movie-on-demand” services.

The Forecast video file server program contains an admission control function. The admission control function determines if there are sufficient resources for a video stream, and if so, such resources are allocated to handle the video stream, (Col. 63, lines 5 – 15).

Applicant respectfully urges that Forecast does not show Applicant’s claimed novel step of *partitioning resources of the server to establish an instance of each virtual server.*” Forecast does not disclose, teach or suggest partitioning the server into individual virtual servers. The Examiner indicates that partitioning resources of the server and allocating resources to each server is set forth in Col. 2, lines 30 – 65 of Forecast. However, that passage in Forecast discusses the Forecast file server’s program for building a specific hardware configuration and a program for managing the allocation of resources of the “specific hardware configuration...the program for building the specific hardware configuration collects information about *the components actually installed in the file server* and determines what components are installed and determines the resources currently provided by each component” (Col. 2, lines 31 – 48.) Such components include, for example, the stream servers 21 (Fig. 2), each of which may comprise a “high-

end commodity computer providing the highest performance appropriate for a stream server at the lowest cost.” (Col. 6, lines 15-17).

In other words, the Forecast file server program relates to the components actually installed in the file server and determines whether resources are available for allocation and de-allocation. Applicant’s invention, on the other hand, involves *partitioning resources of the server to establish an instance of each virtual server*. The Forecast patent does not disclose, teach or suggest establishing virtual servers but instead is discussing actual components implemented in hardware.

Furthermore, Applicant respectfully urges that Forecast also does not show Applicant’s additional novel step of *enabling controlled access to the resources using logical boundary checks and security interpretations of those resources within the server*. Forecast determines if there are sufficient resources to support a video stream. As set forth in the passage cited by the Examiner at Col. 63, lines 5 – 15, Forecast states: “The video service program 715 also responds to a request for a video stream by performing the admission control function of determining whether or not the video file server *has sufficient resources* to support a video stream, and when there are sufficient resources, allocating resources to the stream....” (Col. 63, lines 5-10) (Emphasis added). Forecast further indicates that the admission control function is performed by first allocating a path through the model by way of simulation and when the model determines the best path, and then an actual path is allocated in the video service program.

In sharp contrast, Applicant *enables controlled access to the resources using logical boundary checks and security interpretations of those resources within the server*. In further detail, Applicant’s “boundary checks” are discussed in detail in the Specification, beginning at page 8, line 1:

According to an aspect of the present invention, a vfiler boundary check is performed by the file system of the storage operating system to verify that a current vfiler executing on the filer is allowed to access certain storage resources for a requested file stored on the platform. The vfiler boundary check is based on configuration information, such as the unit of storage (qtree or volume) associated with the file, ac-

quired from an inode of the requested file. Specifically, a file system identifier and qtree identifier are validated in accordance with a multi-stage verification procedure to ensure that they are members of the storage resources allocated to the current vfiler. For every request to access a unit of storage, the boundary check is performed using these identifiers to determine whether the requesting vfiler is authorized to access the storage resource.

(Specification, Page 8, lines 1 – 10). Accordingly, Applicant's logical boundary checks are used to determine whether the requesting vfiler is authorized to access the requested storage resource. If the boundary check determines it is not authorized to access the requested storage resource, the request is denied. Otherwise, the request is allowed and the WAFL file system 330 (Fig. 3) generates operations to process the request.

Applicant's Specification provides an example of the function of the logical boundary checks:

Assume a plurality of NFS clients U1-U3 access a common NFS server. Each NFS client can "see" the set of resources exported by the NFS server. Accordingly, each client can access substantially all resources of the server. In contrast, if the NFS server is configured as filer 400 (Fig. 4), that server is essentially "divided into" (embodied as) virtual servers VF0-VF3. Each vfiler has its own vfiler context and security domain. Assume further that client U1 is allowed to access vfiler VF1's resources, client U2 is allowed to access VF2's resources and client U3 is allowed to access VF3's resources. U1 will fail the novel boundary checks performed by the file system if it attempts to access VF2's resources. The "logical" boundary checks enforce security (access to shares) within the vfiler domain for all clients, including "hackers" attempting to "spoof" NFS handles. The tools used by the hackers can be used to effectively access any inode on a server, even if that storage is not exported to clients. Therefore, another security aspect of the vfiler architecture involves the use of boundary checks (and their associated data structures) for determining access to storage resources on the physical filer.

Specification, Page 25, lines 4-17.

As is apparent from this passage, Applicant's logical boundary checks relate to whether the client request has the required security authorization to access the requested storage resource. This is distinct from Forecast's admission control function, which determines whether there are sufficient available resources in the system to allocate to support a requested video stream.

To summarize, Forecast does not describe or contain either of Applicant's claimed elements. Both clauses of Applicant's claim 1 are missing from the reference.

Accordingly, Applicant respectfully urges that the Forecast patent is legally precluded from anticipating the claimed invention under 35 U.S.C. 102 because of the absence from the Forecast patent of Applicant's steps of *partitioning resources of the server to establish an instance of each virtual server, and of enabling controlled access to the resources using logical boundary checks and security interpretations of those resources within the server*. Neither of those steps is set forth in the Forecast patent.

All independent claims are believed to be in condition for allowance.

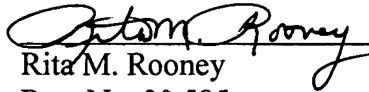
All dependent claims are believed to be dependent from allowable independent claims, and therefore are in condition for allowance.

Favorable action is respectfully solicited.

PATENTS  
112056-0022  
P01-1047

Please charge any additional fee occasioned by this paper to our Deposit Account  
No. 03-1237.

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The measured creep of 6-3211 — an alloy, appellants' npte, having "chemistries" within those of the references — is in excess of three to eight times greater than the creep of the claimed alloys.

The composition and  $N_v$  values of the alloy heats in Table V are as follows:

Alloy No.	Element, Weight %										IN Value
	C	Al	Ti	Mo	Cr	Co	B	Ni	Value		
2-1422	0.07	4.20	3.23	4.70	14.7	18.0	0.030	bal.	2.32		
2-1423	0.06	4.37	3.43	4.43	14.6	17.6	0.028	bal.	2.36		
2-1425	0.06	3.91	2.98	4.40	14.8	17.5	0.028	bal.	2.31		
2-1426	0.05	4.20	3.19	4.50	14.5	17.5	0.030	bal.	2.27		
6-3211	0.06	4.23	3.50	4.93	15.2	18.8	0.030	bal.	2.31		

Although it is apparent that the molybdenum content of 6-3211 exceeds the maximum content of the claimed alloys by 0.15%, it is clearly within the ranges of the Pohlman et al. and Lamb alloys.

[3] However, we are not persuaded that the Table V data are commensurate in

TABLE VI

Room Temperature Tensile Tests

Alloy No.	Condition	psi	0.2% Offset Y.S. Elong.		R.A. (%)	N <sub>v</sub>	
			(psi)	(%)		(%)	Value
2-1426	As-heat-treated	204,000	140,000	16.9	15.0	15.0	2.27
2-1426	As-heat-treated + exposed 5000 hrs. at 1500°F	157,000	100,000	16.1	14.1	14.1	2.27
6-3266	As-heat-treated	194,500	136,800	14.0	13.7	13.7	2.52
6-3266	As-heat-treated + exposed 5000 hrs. at 1500°F	150,500	117,500	5.0	5.5	5.5	2.52

The marked decrease in room temperature ductility (Elong.) after prolonged elevated temperature exposure of the prior art alloy (6-3266), compared to the claimed alloy's (2-1426) essentially unchanged ductility, is contended to show an unexpected result, as was the improvement in measured creep discussed earlier. However, for the same reason that the measured creep test data of Table V are not persuasive of unexpected results, we do not regard the tensile test data of Table VI, comparing only one heat of a claimed alloy, sufficient to rebut the prima facie case of obviousness of the claimed invention.

C. Absence of Sigma Phase

Throughout prosecution appellants have maintained that the claims define "a nickel

scope with appellants' claims. In re Greenfield, 571 F.2d 1185, 1189, 197 USPQ 227, 230, (CCPA 1978).<sup>9</sup> Appellants claim broad ranges of elements, but the weight percent of elements in the four examples of the claimed alloys vary by relatively minor amounts. For example, the entire claimed range of carbon is .18 percent, but the tested range is only .02 (.07 minus .05); the claimed cobalt range is 4.8, but the test range is only 1.3. There is no evidence showing whether other alloys encompassed by appellants' broad claims and having elements varying by relatively major amounts also exhibit a low creep rate.

B. Ductility Test

Appellants' Table VI, set forth in their specification, compares the room temperature ductility of one heat of the claimed alloy (2-1426) and one heat of an alloy (6-3266) which appellants state has "chemistries" within those of the references.

seven alloy examples, all of which meet the composition requirements but exceed the  $N_v$  value requirement of the claimed alloys. However, this affidavit contains no examples of claimed alloys showing the absence, or presence, of sigma. The remainder of the record reveals only a single example of the claimed alloy, which shows the absence of sigma.<sup>10</sup> Appellants' specification includes a photomicrograph of Table V alloy heat 2-1422, which clearly shows the absence of sigma; also, a photomicrograph of Table V alloy heat 6-3211, which shows the presence of sigma. We note again that the prior art teaches that reduction of the  $N_v$  value reduces the chances of sigma phase in the alloy. Here appellants tested only one example of a low  $N_v$  value alloy and found no sigma — a result consistent with both the prior art teaching and appellants' allegation that their claimed alloys are "totally free from sigma phase."<sup>11</sup> Under such circumstances, test results involving a single alloy within the broad range claimed are not sufficient to support appellants' allegation of what would, from the prior art, be unexpected.<sup>12</sup>

In view of the foregoing we hold that appellants have failed to rebut the prima facie case of obviousness.

The decision of the board is affirmed. Affirmed.

<sup>10</sup> Thus, appellants have again failed to show test data commensurate in scope with the broad claims.

<sup>11</sup> We agree with the board that the six United States patents ((1) No. 4,093,474, issued June 6, 1978; (2) No. 4,083,734, issued April 11, 1978; (3) No. 3,930,904, issued January 6, 1976; (4) No. 3,837,838, issued September 24, 1974; (5) No. 3,816,110, issued June 11, 1974; and (6) No. 3,767,385, issued October 23, 1973) introduced into the record by appellants "do support the assertion in the Boesch affidavit that 'any amount of sigma phase' is undesirable." Therefore, we have limited our analysis to the issue of the existence of sigma phase and have not extended it to include the effect of varying amounts of sigma phase.

<sup>12</sup> Where it is alleged that a certain technique for flipping coins would always produce "heads," one would hardly be persuaded by a single toss of a coin which resulted in a showing of "heads."

In re Breslow  
No. 79-602

Decided Feb. 28, 1980

PATENTS

1. Patent grant — In general (§50.01)  
Patent grant — Nature of patent rights — In general (§50.201)

Government grants only right to exclude; there is no other agreement; analogy of a patent to a contract on theory that it is issued in-exchange for invention's disclosure, "consideration," is inexact; patent is statutory right; it is granted to "Whoever" fulfills conditions, Section 101, unless fraud has been committed.

2. Court of Customs and Patent Appeals — Issues determined — Ex parte patent cases (§28.203)

Question of whether claimed compounds "are even formed" on which point Board of Appeals disagreed with examiner who argued that there was no indication nor proof on this point and board expressly held to contrary is not before Court of Customs and Patent Appeals.

3. Patentability — Subject matter for patent monopoly — In general (§51.601)

Ex parte Howard, 328 O.G. 251, 1924 C.D. 75, dealt with construction of "manufacture" rather than "composition of matter," with gob, of at least obvious, molten glass in transitory state rather than with novel chemical compounds, and with mechanical molding process in which it was well known to use molten gob of glass as distinguished from novel chemical process using entirely new and unobvious group of chemical compounds.

4. Patentability — New use or function — Composition of matter (§51.555)  
Patentability — Subject matter for patent monopoly — In general (§51.601)

In re Stubbs, 13 USPQ 358, did not deal with issue of whether claimed compounds are excluded from category of "composition of matter" in Section 101 merely because they are transitory, unstable, and non-isolatable.

5. Patentability — New use or function — Composition of matter (§51.555)

**Patentability — Subject matter for patent monopoly — In general (§51.601)**

**Patentability — Utility (§51.75)**

Requirement that compositions of matter be stable is not read into Section 101; many compounds may find their greatest or even their sole utility in fact that they are not stable.

**6. Patentability — Utility (§51.75)**

**Specification — Sufficiency of disclosure (§62.7)**

Artisan need not literally be in possession of claimed compounds in sense of holding them for time in his hands in "reasonable stable" form; utility only for cross-linking and only when produced in situ is sufficient utility for patentability.

**7. Applications for patent — In general (§15.1)**

**Patentability — New use or function — Composition of matter (§51.555)**

**Patentability — Subject matter for patent monopoly — In general (§51.601)**

**Pleading and practice in Patent Office — In general (§54.1)**

35 U.S.C. 114 authorizes Commissioner, if he so desires, to require models, specimens, and ingredients; argument that Congress, by authorizing Commissioner to require samples of composition, must have intended that composition of matter qualifying as patentable subject matter be something more than composition of matter that is unstable and incapable of being isolated is meritless; Section 114 was never intended to impose any limitations on scope of Section 101 and there is no reason why it should; Act of 1870 made submission of models and specimens discretionary with Commissioner, and rule that models were required by Patent Office was dispensed with in 1880.

**8. Applications for patent — In general (§15.1)**

**Commissioner of Patents — In general (§21.01)**

**Patentability — New use or function — Composition of matter (§51.555)**

**Patentability — Subject matter for patent monopoly — In general (§51.601)**

**Pleading and practice in Patent Office — In general (§54.1)**

Section 114 is merely continuation of ancient authority vested in Commissioner to require model, specimen, or ingredient in rare case in which he sees fit to do so; authorization to request specimen in application for composition of matter bears same relation to such application as request for model does to application for patent on mechanical device; Patent Act of 1952 merely preserved authority in its then existing form for what it was worth; Congress intended broad construction of Section 101; claimed nitrile imines can as well be considered "manufactures" as "composition of matter."

**Particular patents — Nitrile imines**

Breslow, Nitrile Imines, rejection of claims 2, 3, and 8 reversed.

**Appeal from Patent and Trademark Office Board of Appeals**

Application for patent of David S. Breslow, Serial No. 646,309, filed Jan. 2, 1976, continuation of application Serial No. 453,664, filed Mar. 21, 1974, continuation in part of application, Serial No. 720,430, filed Feb. 2, 1968, division of application, Serial No. 447,887, filed Apr. 13, 1965, now U.S. Patent No. 3,418,285. From decision rejecting claims 2, 3, and 8, applicant appeals. Reversed; Baldwin, Judge, concurring with opinion.

Marion C. Staves, Kennett Square, Pa., for appellant.

Joseph F. Nakamura (Fred E. McKelvey and Gerald H. Bjorge, of counsel) for Commissioner of Patents and Trademarks.

Before Markey, Chief Judge, Rich, Baldwin, and Miller, Associate Judges, and Maletz, \* Judge.

Rich, Judge.

This appeal is from the decision of the United States Patent and Trademark Office (PTO) Board of Appeals (board) affirming the rejections of claims 2, 3, and 8 in appellant's application, serial No. 646,309.

\* The Honorable Herbert N. Maletz, Judge, United States Customs Court, sitting by designation.

<sup>1</sup> The present application is a continuation of serial No. 453,664, filed March 21, 1974, which was a continuation in-part of serial No. 720,430,

filed January 2, 1976, for "Nitrile Imines," under 35 USC 101 for failure to define a statutory class of invention and also under 35 USC 112, first paragraph, for not disclosing how to prepare and isolate the claimed compounds. We reverse.

*The Invention*

The new compounds claimed herein, polyfunctional nitrile imines, are one aspect of a broader invention which is described in U.S. Patent No. 3,418,285, which issued on a parent application, as follows: "This invention relates to new cross-linking agents, to cross-linking unsaturated polymers therewith, and to the crosslinked products so produced." The instant application explains that generally any type of unsaturated polymer, containing ethylenic unsaturation wherein there is at least one hydrogen radical attached to at least one of the carbon atoms of the double bond, can be cross-linked with the polyfunctional nitrile imines and that the resulting cross-linked polymers are hard, tough rubbers, substantially insoluble in water and hydrocarbon solvents with improved tensile properties useful in various rubber applications.

The following quotations from appellant's specification are particularly relevant to the issue before us:

The polyfunctional nitrile imines of this invention are relatively unstable compounds, and the primary modes of cross-linking unsaturated polymers with these imines involves their formation in situ in a polymer mass from their closely related but more stable hydrogen chloride salts \* \* \* usually accomplished by contacting the hydrazide chloride with an alkaline material. \* \* \*

The cross-linking is carried out by contacting the unsaturated polymer and a minor amount of the polyfunctional nitrile imine cross-linking agent for a time sufficient for the desired degree of cross-linking to occur. This uniform contacting is preferably achieved by uniformly mixing the polymer and the hydrogen chloride salt of the polyfunctional nitrile imine, and treating that mixture with an alkaline material, thereby generating the nitrile imine in situ in the polymer mass.

The uniform mixing \* \* \* can be carried out by milling these ingredients on a conventional rubber mill, by dissolving the hydrogen chloride salt or the tetrazole precursor in a solvent solution of the polymer, or by any of other numerous methods, which will be readily apparent to those skilled in the art. This uniform contacting will result in the nitrile imine cross-linking agent being uniformly distributed throughout the polymer mass upon its in situ generation, so that uniform cross-linking can be achieved.

Thus, the claimed compounds are simultaneously generated and put to use. The three product claims on appeal are in Markush form, covering a large number of nitrile imines, the novelty, utility, and unobviousness of which have not been questioned. In view of the nature of the rejections, it will not be necessary to consider the claims in detail and quoting them would serve no useful purpose.

*The Rejection*

[1] The examiner relied on no prior art references. He held, first, that the claimed compounds do not fall within any statutory category of invention named in 35 USC 101.<sup>2</sup> For support, he relied on three admissions which appeared in the file of the parent application (serial No. 453,664), as follows: (1) "It is true that the compounds are transitory intermediates"; (2) "they are so reactive that they will react with each other if there is no other coreactant available"; and (3) "it is also true that applicant has not isolated the compounds." On the basis of these admissions, the examiner said in his Answer:

A "transitory intermediate" is not a composition of matter provided for under the normal interpretation of this statute. \* \* \*

\* \* \* as noted above (and below) this is a situation where a "transitory" intermediate, which would not and could not be readily isolated, is being claimed and one of ordinary skill in the art is not

<sup>2</sup> §102. *Inventions patentable*

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

filed February 2, 1968, which in turn is a division of serial No. 447,887, filed April 13, 1965, now U.S. Patent No. 3,418,285. Effective filing date is not an issue.

presented with an enabling disclosure (for more on "enabling" see below) for attaining these compounds, [sic] per se, claimed at bar.

*Decisions:* While no direct precedential decisions have been found that are specifically in point on this 35 U.S.C. 101 issue the following decisions might be of interest: *Ex parte Howard*, 1924 C.D. 75 (item No. 1 on page 76) and *In re Stubbs*, 1932 C.D. 466 (item No. 1 on page 467).

The examiner then made a second rejection of the appealed claims under 35 USC 112, first paragraph, saying:

The first paragraph is pertinent as this disclosure provides no "enabling" data to teach one of ordinary skill in the art how to prepare and *isolate* the compounds, per se, presently being claimed. Derivatives yes, but actual *isolatable* compounds, no.

Put another way, it is clear that as appellant is claiming specific compounds it is appellant's duty (to fulfill the patent contract granted by the government of the United States) to give sufficient teachings to enable one of ordinary skill in the art to produce (or reproduce) and *isolate* such claimed compounds, per se, not derivatives thereof. As urged by the Examiner, supra, appellant has not done so. If it would be obvious to the ordinary skill in the art *how to isolate* such claimed compounds then no problem exists as such would be patentable. \* \* \* herein no such enablement is proffered nor is (are) any reference(s) cited to prove *such isolation* would be within the ordinary skill of the art. [Emphasis ours.]

[2] Another argument made by the examiner was that there was no indication, and certainly no proof, that the claimed compounds "are even formed." The board disagreed with him on this point and expressly held to the contrary, so that question is not before us. The board held that, on the evidence produced by appellant, it is "reasonable to assume that the claimed compounds, in fact, are formed and do exist

\* The examiner's notion about the United States *granting* a contract is inapt. The Government grants only a right to exclude. There is no other agreement. While a patent has often been likened to a contract on the theory that it is issued in exchange for the disclosure of the invention (the "consideration"), the analogy is inexact. A patent is a statutory right. It is granted to "Whoever" fulfills the conditions, §101, note 2 supra, unless fraud has been committed.

one skilled in the art which would put him into possession of the invention so claimed, he has not satisfied the enablement clause of 35 USC 112. This is not to say that we believe appellant must teach the art-skilled how to isolate the claimed compounds in *pure* form; but we do believe that appellant must enable one to obtain the compounds in a reasonably *stable* form. [Emphasis in original.]

#### The Issue

From the foregoing it is apparent that the board affirmed two distinct grounds of rejection: (1) lack of statutory subject matter under §101 and (2) lack of an enabling disclosure in the specification under §112. The matter has here been further simplified, however, by the PTO solicitor in his brief in this court. At the end of his brief he says:

It is the Commissioner's view that the §112 rejection stands or falls with the §101 rejection. If the unstable, non-isolatable, transitory intermediates claimed in claims 2, 3, and 8 are deemed by the Court to be a "composition of matter" within the meaning of §101, then appellant has at least taught how to make the unstable, non-isolatable, transitory compounds *in situ*. It is not apparent what more would be required under the circumstances. The Commissioner, of course, believes the ruling below should prevail on the basis of the §101 rejection.

Thus, the two issues have effectively been reduced to one: Are the claimed compounds, which the board has admitted in fact do exist and can be produced according to the description of appellant's specification, excluded from the category of "composition of matter" in §101 because they are transitory, unstable, and non-isolatable in what the board called "a reasonably *stable* form"? Stated another way, how long must a new and useful compound, which can be made at will for its intended purpose, here as a cross-linking agent, exist to be considered as a "composition of matter" under §101?

#### Opinion

The examiner and the board recognized, and the solicitor appears to concede, that the question raised by this appeal is one of first impression and that it is a question of law.

The PTO brief is devoid of any *reason* for excluding appellant's compounds from §101. It merely says they should be excluded *because* they are unstable and cannot be

isolated, but that simply begs the question. It is said that denying appellant the appealed claims would not *undermine* in any way the public policy behind the patent system. But neither would it support it.

Although the PTO clearly felt, as we feel, that there is no prior decision on facts the same as those here, we will briefly discuss the two cases which were cited and apparently relied on below. The board said of them:

In both of these cases the deciding tribunals held that the claimed products did not fall within one of the statutory classes which may be patented inasmuch as they were transitory and ephemeral in nature.

*Ex parte Howard*, 328 O.G. 251, 1924 C.D. 75 (Ass't. Comm'r. 1922), was decided in the days when a decision of the board of Examiners-in-Chief (now the Board of Appeals) could be appealed to the Commissioner of Patents in person under §47 of the Patent Act of 1870, R.S. 4910 (repealed by §6 of Pub. L. 690, 69th Cong., Mar. 2, 1927, 44 Stat. 1326). It was also then settled that the decision of such appeals to the Commissioner in person could be delegated to the Assistant Commissioner. Hence, we had in this case a decision by Assistant Commissioner Fenning. The first part of his opinion dealt with a claim rejected on prior art and has no bearing here. The second part dealt with a refusal by the Examiners-in-Chief to admit a new claim directed to "a freely-falling drop or gob of glass" of specified characteristics which was created in the course of a process of glass molding, the molten gob falling into the mold to be shaped into an article before it cools. The issue presented was whether the gob was a "manufacture" under R.S. 4886, predecessor statute to §101. Assistant Commissioner Fenning held the claimed hot gob was not a "manufacture" for the following reasons:

I am of the opinion that it is the finished product that the patent statutes are designed to protect as "manufactures" and not something which is produced at a particular stage of the manufacturing process and which is evanescent and adapted for use only in so far as it may enter into and be modified by subsequent steps of a method for producing a complete article.

\* \* \*

\* \* \* the drop of glass claimed is in its temporary condition while being transformed into something else. The

"manufacture" is not yet made, the process of manufacturing is still incomplete.

That is one man's opinion on the application of the statutory term "manufacture" to one set of facts. However, the Commissioner had another reason for refusing to admit the new claim. He noted that the principal difference between the applicant's gob and those disclosed by the prior art lay only in its shape, "the idea being to shape the charge to fit the mold." And that difference, he said, was "merely one of degree." He also took note of a photograph filed with the brief which, he said, seemed to show that applicant's gob was of an old shape and not that of the claim, wherefore "applicant's argument is from theory and not from practice."

[3] Ex parte Howard is distinguishable, therefore, on the grounds that it dealt with the construction of "manufacture" rather than "composition of matter," with a gob of apparently old, or at least obvious, molten glass in a transitory state rather than with a novel chemical compounds, and with a mechanical molding process in which it was well known to use a molten gob of glass as distinguished from a novel chemical process using an entirely new and unobvious group of chemical compounds. While certain analogies can be drawn from the reasoning used, we do not regard the Assistant Commissioner's reasoning as persuasive on the facts before us.

[4] In re Stubbs, 19 CCPA 1216, 58 F.2d 447, 13 USPQ 358 (1932), involved a process for making concrete paving. The affirmance of the rejection of four claims was appealed to this court. All were rejected on prior art. The rejection of two process claims was reversed by this court. The other two claims were directed to paving and are typified by claim 1 reading:

1. Paving for streets, roads, and the like comprising a slab of cut-surface *partly cured concrete*, a coating of bituminous material laid on said cut surface and partially embedded therein, and a coating of sand adhering to the bituminous material. [Emphasis ours.]

The examiner had rejected claims 1 and 2 because they relied on a method step. The board disagreed with the examiner on that ground but held those claims were "primarily improper because as drawn they appear to claim a product in its transitory stage instead of in its final form. The finished product includes concrete which is completely cured and not partly cured." The

pounds in the sense of holding them for a time in his hands in a "reasonable stable" form. Assuming, arguendo, that the claimed compounds are useful only for cross-linking and only when produced in situ — which would be sufficient utility for patentability — those skilled in the art have been put in possession of them by appellant's disclosure just as completely as they have been put in possession of appellant's invention in its process and cross-linked product aspects, now patented.

[7] The solicitor's brief in this court presents a new argument, not made by the examiner or board, as to why §101 should be construed to exclude unstable compounds incapable of being isolated. The contention is that 35 USC 114, which authorizes the Commissioner, if he so desires, to require models, specimens, and ingredients, compels that conclusion. He says:

It is readily apparent that by authorizing the Commissioner to require samples of a composition of matter, Congress must have intended that a composition of matter qualifying as patentable subject matter be something more than a composition of matter which is unstable and incapable of being isolated.

We see no merit in that argument. Considering the origins and history of §114, we do not believe that it was ever intended to impose any limitations on the scope of §101 or that there is any reason why it should. For the origins of §114 one must hark back to §3 of the Patent Act of 1793 which included as part of the patent application "drawings and written references, where the nature of the case admits of drawings, or \* \* \* specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter; \* \* \*." Section 6 of the 1836 Act added: "and he shall moreover furnish a model of his invention, in all cases which admit of a representation by a model, of a convenient size to exhibit advantageously its several parts." That was before anything like modern chemistry had evolved in a time when the Patent Office was largely a museum of technology. Model and specimen storage and exhibition became an aggravated problem for the Office and in 1870 Commissioner Fisher's recommendation to dispense with all models except when absolutely necessary was written into the law by making the submission of models and specimens discretionary with the Com-

missioner. Act of 1870, §§28, 29, R.S.4890, 4891 (1874). See Outline History of the Patent Office, 18 JPOS 116, 138, 168, 175 (July 1936). Although models were required by Patent Office rule for a few more years, that rule was finally dispensed with in 1880. Id. at 137.

[8] Section 114 of the present statute is merely a continuation of the ancient authority vested in the Commissioner to require a model, specimen, or ingredient in the rare case in which he sees fit to do so. This authority is almost never used. E. Stringham, Patent Soliciting and Examining §§1, 54 (1934), and this has been so for a very long time. The authorization to request a specimen in an application for a composition of matter bears the same relation to such an application as a request for a model does to an application for a patent on a mechanical device. A. McCrady, Patent Office Practice §105 (4th ed. 1959). The Patent Act of 1952 merely preserved the authority in its then existing form for what it was worth. The solicitor has cited nothing to indicate that anyone has ever at any time regarded §114 as having any bearing on the construction of §101. It will be noted that Congress in the House report No. 1923, 82nd Cong., 2d Sess., on H.R. 7794, the bill which became the 1952 Patent Act, under the heading "General Description of Bill," found §114 of so little interest that it was not even mentioned. (See p. 7 of the report.) The Senate report is identical in this respect. On the other hand, those same reports clearly indicate that a broad construction of §101 was intended by Congress. Surely, appellant has made his nitrite imines, used them, and taught others how to do so. They can as well be considered "manufactures" as "composition of matter."

Having considered the case of first impression which this appeal presents and the arguments pro and con, we find the rejection of claims 2, 3, and 8 to be without support in law and the decision of the board is reversed.

Reversed.

\* §114. Models, specimens

The Commissioner may require the applicant to furnish a model of convenient size to exhibit advantageously the several parts of his invention. When the invention relates to a composition of matter, the Commissioner may require the applicant to furnish specimens or ingredients for the purpose of inspection or experiment.

## District Court, D. Delaware

PIC Incorporated

v. The Prescon Corporation

No. 76-432

Decided Mar. 5, 1980

## PATENTS

## 1. Oath (§47)

**Pleading and practice in Patent Office**  
— In general (§54.1)

**Pleading and practice in Patent Office**  
— Rules effect (§54.9)

## Reissue — In general (§58.1)

Patent Office, in March 1977, amended its regulations concerning reissue applications and provided, inter alia, for limited participation by interested parties and public in such proceedings; under these new regulations, applicants for reissue may obtain ruling by Patent Office on patent's validity without declaring under oath their belief that original patent is "wholly or partly inoperative or invalid"; through use of this procedure, patentee may now direct Patent Office's attention to prior art or other information relevant to patentability, not previously considered by Office, which might cause examiner to deem original patent invalid, without admitting patent's invalidity; it was hoped that this procedure would improve quality and reliability of issued patents.

## 2. Defenses — Fraud (§30.05)

**Pleading and practice in Patent Office**  
— In general (§54.1)

## Reissue — In general (§58.1)

Applications in which questions of "fraud" or "violation of disclosure" are presented are forwarded to Assistant Commissioner for Patents, in accordance with Manual of Patent Examining Procedures Section 721.01; resolution of fraud issues is deferred while primary examiner first considers all other issues.

**Pleading and practice in Patent Office**  
— In general (§54.1)

**Pleading and practice in Patent Office**  
— Rules effect (§54.9)

## Reissue — In general (§58.1)

New Patent Office reissue regulations provide for participation by protestors

Baldwin, Judge, concurring.

Although I agree with the majority opinion that the mere fact a chemical compound is a "transitory intermediate" is insufficient basis for excluding the compound from coverage under §101, I feel constrained to comment on other issues presented by the appeal.

First, it seems to me that the board confuses a couple of closely related topics in reaching its decision — those topics being the actual existence of the claimed compounds and the further "requirement" for their recovery. Recovery and purification of chemical compounds, for subsequent analysis, has long been desirable as a method for proving the existence of novel compounds. For instance, in some cases involving reduction-to-practice in an interference, it may be necessary to demonstrate their existence. *Young v. Bullitt*, 43 CCPA 932, 233 F.2d 347, 110 USPQ 55 (1956); *Guinot v. Hull*, 40 CCPA 982, 204 F.2d 281, 97 USPQ 441 (1953). Recovery is only for the purpose of showing existence and is not a separate requirement. Here, acceptance of the two opinion affidavits by the board precluded any additional inquiry into areas typically related to the existence of the compound.

I also disagree with the majority's treatment of *Ex parte Howard* and *In re Stubbs*. "Dismissing *Howard* as 'one man's opinion'" and *Stubbs* variously as "not dealing with the issue now before us" and as directed to a claim for "paving consisting of a combination of elements" rather than "new chemical compounds" is not instructive and serves to partially preserve a concept that originally was not sound. If the court overrules *Stubbs* and *Howard* in their effect, it should overrule the cases by name.

I observe that the examiner did not consider the opinion affidavits sufficient to prove the existence of the compounds especially in view of appellant's admission in the specification that the compounds are "transitory" and "are so reactive that they react with each other." *In re Brandstadter*, 484 F.2d 1395, 179 USPQ 286 (CCPA 1973); but see *In re Sebek*, 59 CCPA 1220, 465 F.2d 904, 175 USPQ 93 (1972).

The board, by its own action, has applied these cases in issues similar to those "now before us" and would, apparently, disagree that they are legally unrelated. *Ex parte Dubsky*, 162 USPQ 567 (Bd. App. 1968); *Ex parte Nelson*, 109 USPQ 116 (Bd. App. 1955). The board, in both *Nelson*

ing; protestors may likewise request permission to file brief and appear at oral argument; however, protestor's brief is only to be considered by examiner in preparing his answering brief; moreover, right to participate in oral argument is granted by Board of Appeals only if it decides that "issues on appeal are such that protestor's participation at the hearing would be helpful"; however, protestor will not be heard if reissue applicant does not request oral hearing, or provides timely notification to board and protestor that reissue applicant will not appear; thus, patent applicant has ability to prevent protestor from appearing before Board of Appeals.

**5. Court of Customs and Patent Appeals**  
— Jurisdiction (§28.25)

**Pleading and practice in Patent Office**  
— Rules effect (§54.9)

**Revised Statutes 4915 suits (35 U.S.C. 145) — In general (§59.01)**

Any applicant dissatisfied with Board of Appeals' decision may appeal to Court of Customs and Patent Appeals or file civil action in federal district court; no provision is made in Patent Office regulations for appeal by protestor who is dissatisfied with board's decision.

**6. Pleading and practice in Patent Office**  
— In general (§54.1)

**Pleading and practice in Patent Office**  
— Rules effect (§54.9)

## Reissue — In general (§58.1)

Even though more protestor participation than was originally contemplated by Patent Office is being provided in accordance with Dec. 1978 guidelines, such participation has been approached cautiously due to delay and harassment dangers and resultant expenses to applicant; Patent Office does not declare reissue application proceeding a "contested case," because of these same concerns and Manual of Patent Examining Procedures states that "question of patentability has been uniformly looked upon as ex parte in character" and "is question between the applicant and the Office on behalf of the public"; under Patent Code and Patent Office regulations, "contested case" proceedings provide opportunity for testimony of witnesses, discovery, and hearings.

**7. Estoppel — As to validity — In general (§35.151)**

ding reissue applications, which may include citations to prior art or other related information; as originally promulgated, reissue rules contemplated no further participation by protestors in reissue proceedings; however, further guidelines relating to Patent Rules 175 and 291, adopted on Dec. 12, 1978, expanded somewhat role of protestors in reissue proceedings; protestor may now "monitor the proceedings," file such additional papers as it considers appropriate, and request Patent Office to supply it with "copies of Office actions or other documents mailed by the Office"; such documents will be sent to protestors at "sole discretion of and for the convenience of" Patent Office; under 1978 guidelines, examiner may communicate with protestor in writing to seek clarification and/or additional information; however, such communication normally should not be necessary where protestor has supplied only published prior art; also, it is made clear that protestors are to refrain from any oral communication with examiners except to ask purely procedural questions, unless specifically authorized in writing by Assistant Commissioner for Patents; examiner is also given discretion to solicit protestor's comments on responses to Patent Office actions submitted by patent applicants; however, such opportunity to comment is only provided "where it would appear to be of benefit to the examination process and only with the approval of a Supervisory Primary Examiner."

**4. Board of Appeals — Procedure and practice (§19.45)**

**Pleading and practice in Patent Office**  
— In general (§54.1)

**Pleading and practice in Patent Office**  
— Rules effect (§54.9)

## Reissue — In general (§58.1)

Guidelines relating to Patent Rules 175 and 291, adopted on Dec. 12, 1978, provide very limited opportunity for protestor participation in interviews with patent examiner and in oral argument before Board of Appeals; protestor participation in interviews will normally not be permitted by Assistant Commissioner unless "special justifying circumstances exist," and in no case will protestor be granted interview with examiner without applicant present; under regulations, only patent applicant may appeal adverse decision of examiner to Board of Appeals; in proceedings before

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